1 Identification

. Product identifier
  . Trade name EPOXY BASED POWDER COATING METALLIC
  . Article number: 2/3/4/5/8(69)M
  . Manufacturer/Supplier:
    USA:
    TIGER Drylac U.S.A., Inc.
    3945 Swenson Ave
    St. Charles, IL 60174
    Phone: +1-630-587-2918
    Fax: +1-630-587-2923

    Canada:
    TIGER Drylac Canada Inc.
    110 Southgate Drive
    Guelph, Ontario, N1G 4P5
    Phone: +1-519-766-4781
    Fax: +1-519-766-4787

    Mexico
    TIGER Drylac Mexico S.A. de C.V.
    Circuito Exportación 212, Parque Industrial Tres Naciones
    San Luis Potosí, SLP, C.P. 78395
    Phone: +52-444-799-7243
    Fax: +52-444-799-7244

. Informing department: Product Safety Department
. Emergency telephone number: 24/7:1-800-255-3924; International:+01 or +001-813-248-0585

2 Hazard(s) identification

. Classification of the substance or mixture
  
  !
  GHS07

  Eye Irrit. 2A     H319     Causes serious eye irritation.
  Skin Sens. 1     H317     May cause an allergic skin reaction.

  Combustible Dust     May form combustible dust concentrations in air.

. Label elements
  . GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).
  . Hazard pictograms

  !
  GHS07

. Signal word Warning

. Hazard-determining components of labeling:
  1-0-tolylbiguanide

. Hazard statements
  Causes serious eye irritation.
  May cause an allergic skin reaction.
  May form combustible dust concentrations in air.

(Contd. on page 2)
Precautionary statements
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves / eye protection / face protection.
If on skin: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system
NFSA ratings (scale 0-4)
Health = 1
Fire = 1
Reactivity = 1
HMIS-RATINGS (SCALE 0 – 4)
HEALTH 1
Fire 1
Reactivity 1
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

Composition/information on ingredients
Chemical characterization: Mixtures
Description: Mixture consisting of the following components with harmless additives.

Hazardous ingredients:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>13463-67-7 titanium dioxide</td>
<td>10-25%</td>
</tr>
<tr>
<td>7727-43-7 barium sulphate, natural</td>
<td>10-25%</td>
</tr>
<tr>
<td>54553-90-1 benzene-1,2,4,5-tetracarboxylic acid, compound with 4,5-dihydro-2-phenyl-1H-imidazole (1:1)</td>
<td>2.5-10%</td>
</tr>
<tr>
<td>Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335</td>
<td></td>
</tr>
<tr>
<td>93-69-6 1-o-tolylbiguanide</td>
<td>2.5-10%</td>
</tr>
<tr>
<td>Acute Tox. 4, H302; Eye Irrit. 2A, H319; Skin Sens. 1, H317</td>
<td></td>
</tr>
<tr>
<td>7429-90-5 aluminum powder (stabilized)</td>
<td>&lt;2.5%</td>
</tr>
<tr>
<td>Flam. Sol. 1, H228; Water-react. 2, H261</td>
<td></td>
</tr>
<tr>
<td>12001-26-2 mica</td>
<td>&lt;2.5%</td>
</tr>
<tr>
<td>936-49-2 2-phenyl-2-imidazoline</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Acute Tox. 3, H301; Eye Dam. 2, H318; Skin Irrit. 2, H335</td>
<td></td>
</tr>
</tbody>
</table>

Additional information For the wording of the listed hazard phrases refer to section 16.

First-aid measures
Description of first aid measures
After inhalation
Supply fresh air and call for doctor for safety reasons.
In case of unconsciousness bring patient into stable side position for transport.
After skin contact
Instantly wash with water and soap and rinse thoroughly.
After eye contact
Rinse opened eye for several minutes under running water.
Trade name EPOXY BASED POWDER COATING METALLIC

- **After swallowing** In case of persistent symptoms consult doctor.
- **Information for doctor**
  - **Most important symptoms and effects, both acute and delayed**
    No further relevant information available.
  - **Indication of any immediate medical attention and special treatment needed**
    No further relevant information available.

---

**5 Fire Fighting Measures**

- **Extinguishing media**
- **Suitable extinguishing agents**
  CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **Special hazards arising from the substance or mixture**
  No further relevant information available.
- **Advice for firefighters**
- **Protective equipment: No special measures required.**

---

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
  Avoid causing dust.
- **Environmental precautions:**
  Do not allow product to reach sewage system or water bodies.
  Inform respective authorities in case product reaches water or sewage system.
- **Methods and material for containment and cleaning up:** Collect mechanically.
- **Reference to other sections**
  See Section 7 for information on safe handling
  See Section 8 for information on personal protection equipment.
  See Section 13 for information on disposal.

**Protective Action Criteria for Chemicals**

<table>
<thead>
<tr>
<th>PAC-1</th>
<th>25036-25-3</th>
<th>Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)bis[oxirane]</th>
<th>12 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13463-67-7</td>
<td>titanium dioxide</td>
<td>30 mg/m³</td>
</tr>
<tr>
<td></td>
<td>7727-43-7</td>
<td>barium sulphate, natural</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td></td>
<td>12001-26-2</td>
<td>mica</td>
<td>9 mg/m³</td>
</tr>
<tr>
<td></td>
<td>7631-86-9</td>
<td>silicon dioxide, chemically prepared</td>
<td>18 mg/m³</td>
</tr>
<tr>
<td></td>
<td>1344-28-1</td>
<td>aluminium oxide</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td></td>
<td>1314-23-4</td>
<td>zirconium dioxide</td>
<td>14 mg/m³</td>
</tr>
<tr>
<td></td>
<td>471-34-1</td>
<td>calcium carbonate</td>
<td>45 mg/m³</td>
</tr>
<tr>
<td></td>
<td>14808-60-7</td>
<td>quartz (SiO₂)</td>
<td>0.075 mg/m³</td>
</tr>
<tr>
<td></td>
<td>1309-37-1</td>
<td>diiron trioxide</td>
<td>15 mg/m³</td>
</tr>
<tr>
<td></td>
<td>1308-14-1</td>
<td>chromium hydroxide(III)</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td></td>
<td>18282-10-5</td>
<td>tin dioxide</td>
<td>7.6 mg/m³</td>
</tr>
</tbody>
</table>

- **PAC-2:**
  - 25036-25-3 | Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)bis[oxirane] | 130 mg/m³ |
  - 13463-67-7 | titanium dioxide | 330 mg/m³ |
  - 7727-43-7 | barium sulphate, natural | 170 mg/m³ |
  - 12001-26-2 | mica | 99 mg/m³ |
  - 7631-86-9 | silicon dioxide, chemically prepared | 740 mg/m³ |
  - 1344-28-1 | aluminium oxide | 170 mg/m³ |
  - 1314-23-4 | zirconium dioxide | 110 mg/m³ |
  - 471-34-1 | calcium carbonate | 210 mg/m³ |

(Contd. on page 4)
### 7 Handling and storage

#### Handling

**Precautions for safe handling**

No special measures required.

Store in cool, dry place in tightly closed containers.

Prevent formation of dust.

**Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Dust can combine with air to form an explosive mixture.

#### Conditions for safe storage, including any incompatibilities

#### Storage

**Requirements to be met by storerooms and containers:**

Store only in the original container.

Static charges may build up in the powder.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:**

Store in cool, dry conditions in well sealed containers.

**Specific end use(s)**

No further relevant information available.

---

### 8 Exposure controls/personal protection

#### Additional information about design of technical systems

No further data; see item 7.

#### Control parameters

**Components with critical values that require monitoring at the workplace:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

#### 13463-67-7 titanium dioxide

<table>
<thead>
<tr>
<th>PEL (U.S.A)</th>
<th>Long-term value: 15* mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>*total dust</td>
<td></td>
</tr>
</tbody>
</table>

(Contd. on page 5)
Trade name EPOXY BASED POWDER COATING METALLIC

<table>
<thead>
<tr>
<th></th>
<th>REL (U.S.A)</th>
<th>TLV (U.S.A)</th>
<th>EL (Canada)</th>
<th>EV (Canada)</th>
<th>LMPE (Mexico)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>See Pocket Guide App. A</td>
<td>Long-term value: 10 mg/m³</td>
<td>Long-term value: 10* 3** mg/m³</td>
<td>Long-term value: 10 mg/m³</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
<tr>
<td></td>
<td>withdrawn from NIC</td>
<td>*total dust; **respirable fraction; IARC 2B</td>
<td>total dust</td>
<td>total dust</td>
<td>total dust</td>
</tr>
</tbody>
</table>

7727-43-7 barium sulphate, natural

<table>
<thead>
<tr>
<th></th>
<th>PEL (U.S.A)</th>
<th>REL (U.S.A)</th>
<th>TLV (U.S.A)</th>
<th>EL (Canada)</th>
<th>EV (Canada)</th>
<th>LMPE (Mexico)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-term value: 15* 5** mg/m³</td>
<td>Long-term value: 10* 5** mg/m³</td>
<td>Long-term value: 5* mg/m³</td>
<td>Long-term value: 10* 3** mg/m³</td>
<td>Long-term value: 10 mg/m³</td>
<td>Long-term value: 10 mg/m³</td>
</tr>
<tr>
<td></td>
<td>*total dust **respirable fraction</td>
<td>*total dust **respirable fraction</td>
<td>*inhalable fraction; E</td>
<td>*total dust, **respirable fraction</td>
<td>total dust</td>
<td>total dust</td>
</tr>
</tbody>
</table>

7429-90-5 aluminum powder (stabilized)

<table>
<thead>
<tr>
<th></th>
<th>PEL (U.S.A)</th>
<th>REL (U.S.A)</th>
<th>TLV (U.S.A)</th>
<th>EL (Canada)</th>
<th>EV (Canada)</th>
<th>LMPE (Mexico)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-term value: 15* 5** mg/m³</td>
<td>Long-term value: 10* 5** mg/m³</td>
<td>Long-term value: 1* mg/m³</td>
<td>Long-term value: 1.0 mg/m³</td>
<td>Long-term value: 1* mg/m³</td>
<td>Long-term value: 1* mg/m³</td>
</tr>
<tr>
<td></td>
<td>*Total dust; ** Respirable fraction</td>
<td>as Al*Total dust**Respirable/pyro powd./welding f.</td>
<td>as Al; *as respirable fraction</td>
<td>respirable, as Al</td>
<td>respirable</td>
<td>respirable</td>
</tr>
</tbody>
</table>

12001-26-2 mica

<table>
<thead>
<tr>
<th></th>
<th>PEL (U.S.A)</th>
<th>REL (U.S.A)</th>
<th>TLV (U.S.A)</th>
<th>EL (Canada)</th>
<th>EV (Canada)</th>
<th>LMPE (Mexico)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long-term value: 20 mppcf ppm</td>
<td>Long-term value: 3* mg/m³</td>
<td>Long-term value: 3* mg/m³</td>
<td>Long-term value: 3 mg/m³</td>
<td>Long-term value: 3(D) mg/m³</td>
<td>Long-term value: 3* mg/m³</td>
</tr>
<tr>
<td></td>
<td>&lt;1% crystalline silica</td>
<td>*respirable dust; containing &lt; 1% quartz</td>
<td>*as respirable fraction</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional information:
The lists that were valid during the compilation were used as basis.

Exposure controls

Personal protective equipment

General protective and hygienic measures
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
46. Breathing equipment:

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Protection of hands:

Protective gloves.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety Glasses

Body protection: Protective work clothing.

9 Physical and Chemical Properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Solid
Colour: According to Trade Name
Smell: Characteristic
Odor threshold: Not determined
pH-value: Not applicable

Change in condition

Melting point/Melting range: > 50 °C / 120°F
Boiling point/Boiling range: Not applicable

Flash point: Not applicable

Inflammability (solid, gaseous) Not determined

Ignition temperature: 400 °C (752 °F)

Decomposition temperature: Not determined

Self-inflammability: Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/dust mixtures is possible

Critical values for explosion:

Lower: Not determined.
Upper: Not determined.

Steam pressure: Not applicable.

Density (Specific gravity) at 20 °C (68 °F) 1.66 g/cm³ (13.85 lbs/gal)

Relative density Not determined.

Vapor density Not applicable.
10 Stability and Reactivity

Reactivity
No further relevant information available.

Chemical stability
Conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions
No dangerous reactions known

Conditions to avoid
No further relevant information available.

Incompatible materials
No further relevant information available.

Hazardous decomposition products:
In case of fire: CO, CO2, NOx

11 Toxicological Information

Information on toxicological effects

Acute toxicity:
Primary irritant effect:
  on the skin: No irritant effect.
  on the eye: No irritant effect.
Sensitization: Sensitization possible by skin contact.

Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)
13463-67-7 titanium dioxide 2B
7631-86-9 silicon dioxide, chemically prepared 3
14808-60-7 quartz (SiO2) 1
1309-37-1 diiron trioxide 3

NTP (National Toxicology Program)
14808-60-7 quartz (SiO2) K

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability No further relevant information available.

Behaviour in environmental systems:
Bioaccumulative potential No further relevant information available.
Mobility in soil No further relevant information available.

Ecotoxicological effects:
Remark: Harmful to fish
Trade name EPOXY BASED POWDER COATING METALLIC

. Additional ecological information:
. General notes:
   Generally not hazardous for water.
   Harmful to aquatic organisms
. Results of PBT and vPvB assessment
   PBT: Not applicable.
   vPvB: Not applicable.
. Other adverse effects No further relevant information available.

13 Disposal considerations

. Waste treatment methods
. Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

. Uncleaned packagings:
. Recommendation: Disposal must be made according to official regulations.

*14 Transport information

. UN-Number
. ADR, IMDG, IATA: N/A
. UN proper shipping name: N/A
. DOT, ADR, IMDG, IATA: N/A
. Transport hazard class(es)
. DOT, IMDG, IATA
. Class: Not regulated.
. Packing group
. ADR, IMDG, IATA: N/A
. Environmental hazards:
. Marine pollutant: No
. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

*15 Regulatory information

. Safety, health and environmental regulations/legislation specific for the substance or mixture

. SARA (Superfund Amendments and Reauthorization Act):

. Section 355 (Extremely hazardous substances):
   None of the ingredients is listed.

. Section 313 (Specific toxic chemical listings):

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7727-43-7</td>
<td>barium sulphate, natural</td>
</tr>
<tr>
<td>7429-90-5</td>
<td>aluminum powder (stabilized)</td>
</tr>
<tr>
<td>1344-28-1</td>
<td>aluminium oxide</td>
</tr>
</tbody>
</table>

. TSCA (Toxic Substances Control Act):
   All ingredients are listed.

. TSCA new (21st Century Act) (Substances not listed)

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7429-90-5</td>
<td>aluminum powder (stabilized)</td>
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<tr>
<td>12001-26-2</td>
<td>mica</td>
</tr>
<tr>
<td>936-49-2</td>
<td>2-phenyl-2-imidazoline</td>
</tr>
</tbody>
</table>

(Contd. on page 9)
Trade name EPOXY BASED POWDER COATING METALLIC

1. Proposition 65:

. Chemicals known to cause cancer:

- 13463-67-7 titanium dioxide

. Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

. Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

. Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

2. Cancerogenity categories

. EPA (Environmental Protection Agency)

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical</th>
<th>Category</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7727-43-7</td>
<td>barium sulphate, natural</td>
<td>D, CBD(inh), NL(oral)</td>
<td></td>
</tr>
</tbody>
</table>

. TLV (Threshold Limit Value established by ACGIH)

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>13463-67-7</td>
<td>titanium dioxide</td>
<td>A4</td>
</tr>
<tr>
<td>1344-28-1</td>
<td>aluminium oxide</td>
<td>A4</td>
</tr>
<tr>
<td>1332-58-7</td>
<td>kaolin</td>
<td>A4</td>
</tr>
<tr>
<td>1314-23-4</td>
<td>zirconium dioxide</td>
<td>A4</td>
</tr>
<tr>
<td>14808-60-7</td>
<td>quartz (SiO2)</td>
<td>A2</td>
</tr>
<tr>
<td>1309-37-1</td>
<td>diiron trioxide</td>
<td>A4</td>
</tr>
</tbody>
</table>

. NIOSH-Ca (National Institute for Occupational Safety and Health)

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>13463-67-7</td>
<td>titanium dioxide</td>
</tr>
<tr>
<td>14808-60-7</td>
<td>quartz (SiO2)</td>
</tr>
</tbody>
</table>

3. GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

4. Hazard pictograms

GHS07

5. Signal word Warning

6. Hazard-determining components of labeling:

1-o-tolylbiguanide

7. Hazard statements

Causes serious eye irritation.
May cause an allergic skin reaction.
May form combustible dust concentrations in air.

8. Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves / eye protection / face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
**16 Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases**
- H228 Flammable solid.
- H261 In contact with water releases flammable gas.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

**Date of preparation / last revision** 11/08/2017

**Abbreviations and acronyms:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Flam. Sol. 1: Flammable solids - Category 1
- Water-react. 2: Substances and mixtures which in contact with water emit flammable gases - Category 2
- Acute Tox. 3: Acute toxicity - Category 3
- Acute Tox. 4: Acute toxicity - Category 4
- Skin Irrit. 2: Skin corrosion/irritation - Category 2
- Eye Dam. 1: Serious eye damage/eye irritation - Category 1
- Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A
- Skin Sens. 1: Skin sensitisation - Category 1
- STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

* Data compared to the previous version altered.